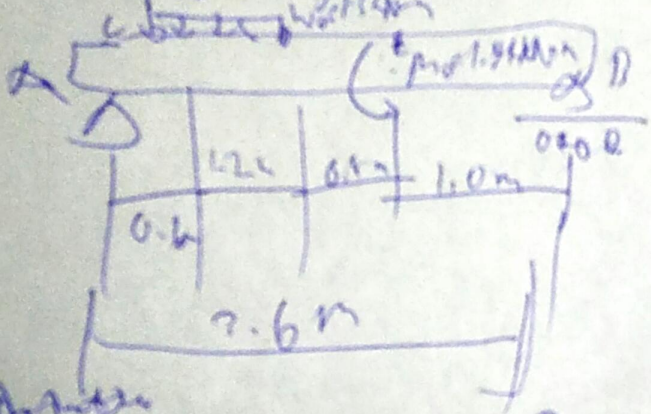

From equations given:

$$EI\frac{dy}{dx} = \frac{2.6}{2}x^2 - \frac{1.2}{2}\langle x-0.6\rangle^2 - \frac{1.5}{6}\langle x-0.6\rangle^3 + \frac{1.5}{6}\langle x-1.4\rangle^3 - 1.44\langle x-2.2\rangle + C_1$$

$$EIy = \frac{2.6}{6}x^3 - \frac{1.2}{6}\langle x-0.6\rangle^3 - \frac{1.5}{24}\langle x-0.6\rangle^4 + \frac{1.5}{24}\langle x-1.4\rangle^4 - \frac{1.44}{2}\langle x-2.2\rangle^2 + C_1 x + C_2$$

From boundary conditions $x=0, y=0$; $x=2.6, y=0$:

$$C_1 = 0,\ C_2 = 0$$

$$EI y(1.8) = \frac{2.6}{6}(1.8)^3 - \frac{1.2}{6}(1.8-0.6)^3 - \frac{1.5}{24}(1.8-0.6)^4$$

$$EI y(1.8) = EI y_D = 2.052\ \text{kN-m}^3$$

$$y_D = \frac{2.052\ \text{kN-m}^3}{EI}$$

$$\frac{[FL^3]}{\left[\frac{F}{L^2}\right][L]} = [L]$$

$$y_D = \frac{2.052\ \text{kN-m}^3}{EI}$$